Flow Line Options

DigaTouch™ Advanced Universal Display Manual

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Introduction

Please read carefully! No liability can be accepted for damage caused by improper use or installation of the DigaTouch Universal Display

DigaTouch™ Advanced Universal Process Display is a panel or field mount process display that provides bright, 6 digit LED indication, internal DC power supply for transmitter power, and advanced communications. DigaTouch features universal I/O, touch screen interface, dual AC/DC power supply, password protection, and Ethernet communication. This device is well suited for a variety of process applications. Typical applications include pump control, data logging, display, level monitoring, open channel monitoring, pressure monitoring, and temperature monitoring.

The DigaTouch is available for either level monitoring, analytical measurements, distance monitoring, pressure monitoring, weight/volume monitoring, and temperature monitoring.

Safety Precautions ⚠

If you are unsure of the suitability of a DigaCom display for your installation, please consult your FLO-Corp representative for further information.

Electrical Shock Hazard
It is possible to contact components that carry high voltage, causing serious injury or death. All power to the DigaTouch and the relay circuit it controls should be turned OFF prior to working on the DigaTouch. If it is necessary to make adjustments during powered operation, use extreme caution and use only insulated tools. Making terminal block adjustments or installation adjustments to a powered DigaTouch is not recommended.

Flammable or Explosive Applications
FLO-Corp manufactures several different display models with different mounting and internal configurations. It is the user's responsibility to select a controller model that is appropriate for the application, install it properly, perform tests on the installed system, and maintain all components.

ATTENTION
DigaTouch products are compatible with supply voltage of 90-265 VAC and 12-28 VDC. Please respect the polarity of the power terminals as indicated in this user's manual, and on the instrument itself. Flow Line Options assumes no responsibility for incorrect wiring of the DigaTouch or any instrument connected to.

DigaTouch Universal Process Displays are not recommended for life support applications or applications where malfunctioning could result in personal injury or property loss. Anyone using this product for these types of applications should do so at his or her own risk. Flow Line Options Corporation will not be held liable for damages resulting from such improper use.

Disclaimer
The information contained in this document is subject to change without notice. Flow Line Options Corporation makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose.

Incorrect Wiring
Flow Line Options Corporation assumes no responsibility for users incorrectly wiring their DigaTouch (including but not limited to): Supply Voltage, Transmitter Power Supply, 4-20mA Input and Output, ModBus RS485, Pulse, Frequency, Ethernet connection. Please refer to the wiring diagrams for correct wiring of the DigaCom Display.

Limited Warranty
Flow Line Options Corporation warrants this product against defects in material or workmanship for the specified period under "Specifications" from the date of shipment from the factory. Flow Line Options Corporation liability under this limited warranty shall not exceed the purchase value, repair, or replacement of the defective unit.

Registered Trademarks
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Specifications

Display Type	6-digit, Red LED
Display Units	Engineering
Decimal Point	Up to 5 places
Display Output	-99999 to 999999
Status Indicators	(1) Totalizer, Yellow LED (4) Relay, Red LED
Display Height	0.6” (15 mm)
Over Range	Display flashes HIGH and Max. Display Value
Under Range	Display flashes LOW and Min. Display Value
User Interface	Four touch screen buttons or DigaLink PC Windows® Software
Display Refresh Rate	Once Per Second (1/s)
Password	Programmable, restricts modification of settings
Operating Temperature	F: 32º to 140º C: 0º to 60º
Storage Temperature	F: -40º to 185º C: -40º to 85º
Relative Humidity	0 to 90º non-condensing
Accuracy	±0.1% of calibrated span ± count
Temperature Drift	0.005% of calibrated span/º C max from 0 to 65ºC ambient; 0.01% of calibrated span/ ºC max from -40 to 0º C ambient
Supply Voltage	AC Supply: 90-265 VAC @ 50-60 Hz, 15W Max. DC Supply: 12-28 VDC @ 0.5A (Fuse protected via 0.5A slow blow)
Transmitter Power	120 mA @ 24 VDC 24 VDC for AC powered units; For DC powered units, supply voltage equals the DC input voltage
Pulse Input	1 to 24 VDC, 1 to 3000 Hz
Low Voltage Input	125 mV to 12 VAC, 1 to 30 KHz
Digital Input	Remote total reset
Analog Input	4-20 mA current loop, 0-5 VDC, 1-5 VDC, 0-10 VDC

Analog Output	Isolated 4-20 mA current loop
Connection	Removable screw terminal Accepts 12-22 AWG Wire
Enclosure Type	Panel or Field Mount Models
Field Mount Enclosure Rating	NEMA 4X, NEMA 7 or General Purpose
Enclosure Material	Polycarbonate
Classification	General Purpose
Communications	
Serial Port	RS-485, Screw Terminal
Ethernet Port	10/100 Base-T (RJ-45)

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Installation and Setup

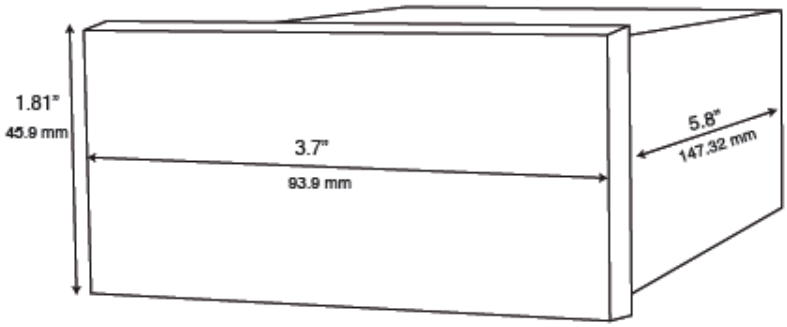
1. Disconnect electrical power from the target system before making or changing any transmitter connections

2. Use 0.5A fast acting fuse if non-current limited power sources are utilized

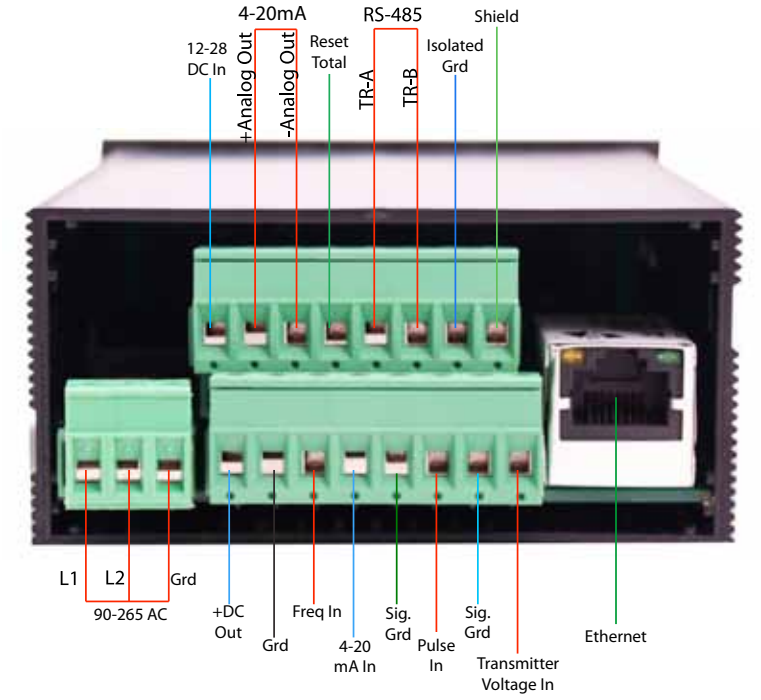
3. Terminate cable shield connection at either DC ground or Earth ground

4. Mount the transmitter so the Display Faceplate is facing out

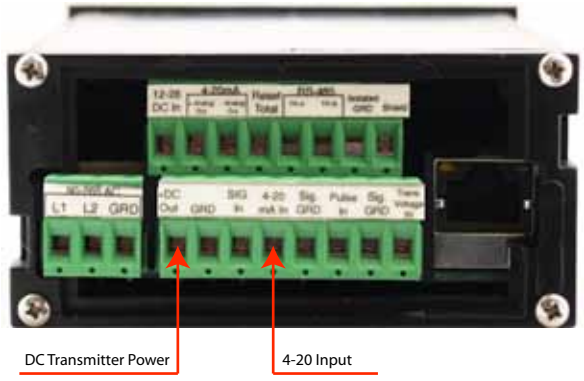
5. Install unit in desired location



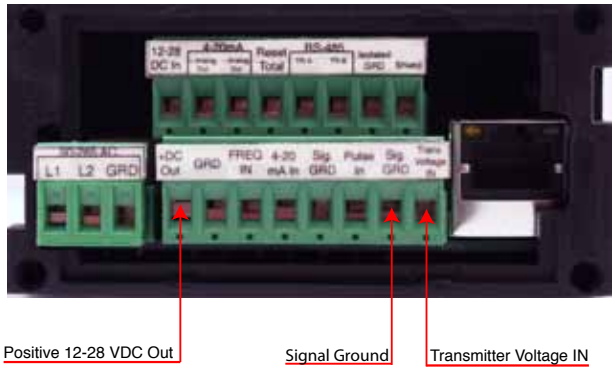
Wiring Diagrams



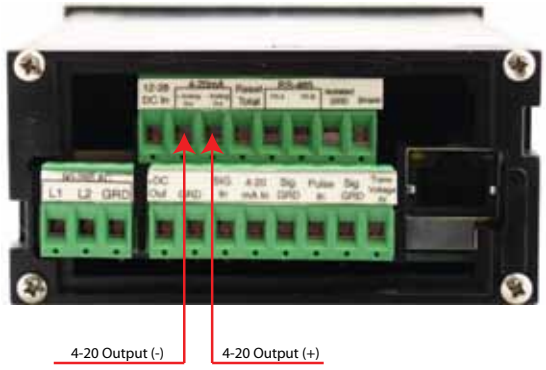
4-20 IN



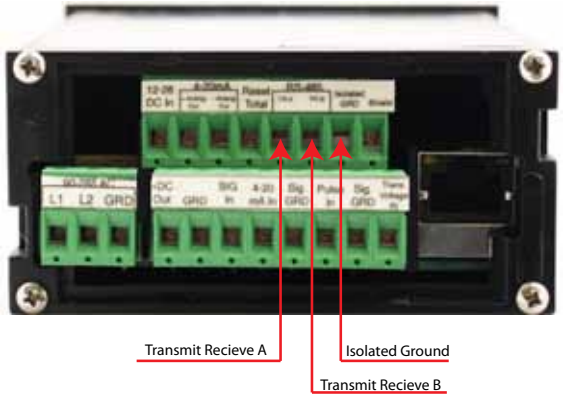
0-5V/0-10V IN



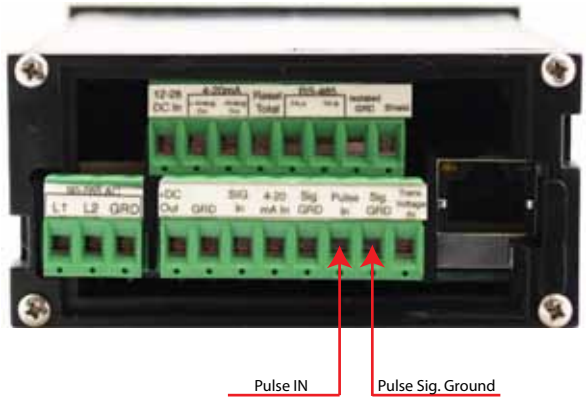
4-20 mA Output



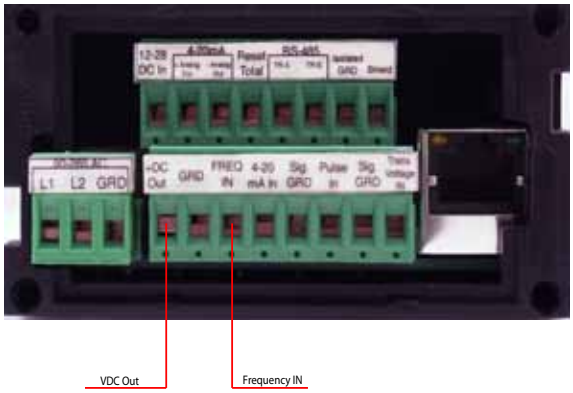
RS-485 Serial Communication



Pulse IN



Frequency IN



Configuration

Calibration of Input (4-20 mA, 0-5V, 0-10V, Pulse and Frequency)

1. Press: Menu
   1. DigaTouch will read: ConFig (Configure) *fig. 1*

2. Press: Enter
   1. DigaTouch will read: InPut (Input) *fig. 2*

3. Press: Enter
   1. DigaTouch will read: 4-20 (4-20mA) *fig. 3*

4. Press: Up to scroll through different inputs as listed below:
   1. PULSE (Pulse)
   2. FrEQ (Frequency)
   3. 0-10V
   4. 0-5V
   5. 4-20mA

5. Once desired input is selected, Press: Enter
   1. DigaTouch will read: ConFig (Configure) *fig. 1*

6. Press: Menu
   1. DigaTouch will read: Store, then display Firmware version (Ex: P2.06)
      a. DigaTouch will enter normal RUN mode

figure 1

figure 2

figure 3

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Configuration of DigaTouch Displaying Rate, Total, or Both Rate and Total

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Enter
   1. DigaTouch will Read: InPut (Input) *fig. 2*

3. Press: Down
   1. DigaTouch will Read: DiSPLA (Display) *fig. 4*

4. Press: Enter
   1. DigaTouch will Read: rAtE (Rate) *fig. 5*

5. Press: Down to scroll between rAtE (Rate), totAL (Total), or botH (Both)
   - Both rate and total to display
   * NOTE: LED Indicator next to tot (Total) will illuminate if totAL or botH is selected *fig. 6 & fig. 7*

6. Once desired Display reading is selected Press: Enter
   1. DigaTouch will Read: CUtOFF (CUTOFF) *fig. 8*

7. Press: Enter to configure the Cutoff settings or
   Press: Menu twice to opt out into Run Mode.

figure 4

figure 5

figure 6

Configuration of Low Flow Cutoff

This DigaTouch can be configured to display a minimum rate. For example, if your process application requires you to read any value over 5; values under 5 are not important, you can configure your DigaTouch to read only values above a preset minimum value.

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

3. Press: Down until DigaTouch reads CUtOFF (Cutoff) *fig. 8*

4. Press: Enter
   1. DigaTouch will Read: 00000.0

5. Press: Up to configure the first numerals value

6. Press: Down to scroll to the next or desired numeral

7. Repeat this process until desired Cutoff value is configured

8. Press: Enter once desired Cutoff value is obtained
   1. DigaTouch will read FACtor (Exponential Factor)

9. Press: Enter to calibrate Exponential Factor Settings or press: Menu twice to enter into Run Mode.

figure 7

figure 8

figure 9

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Configuration of DigaTouch Totalizer Exponential Factor (Multiplier)

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Enter

3. Press: Down until DigaTouch reads FACtor (Totalizer Exponent)

4. Press: Enter
   1. DigaTouch will Read: E1 (Exponent 1)
   2. Press: Up to configure the Totalizer Multiplier Position

5. Once Desired Mulitiplier Position is configured, Press: Enter

6. Press: Menu twice to exit into Run Mode

figure 10

figure 11

Fine Adjustment of 4-20mA Output Value
This DigaTouch is capable of narrowing down a specific 4mA and 20mA output value

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Enter
   1. DigaTouch will Read: InPut (Input) *fig. 2*

3. Press: Down until DigaTouch reads: St 4-20 (Store 4-20) *fig. 10*

4. Press: Enter
   1. DigaTouch will Read: No

5. Press: Up
   1. DigaTouch will Read: Yes

6. Press: Enter
   1. DigaTouch will Read: 4nA (4mA) *fig. 11*

7. Press: Enter

8. Press: Up or Down Keys until desired 4mA output value is obtained

9. Press: Enter
   1. DigaTouch will Read: 20nA (20mA)

10. Press: Enter

11. Press: Up or Down Keys until desired 20mA output value is obtained

12. Press: Enter
    1. DigaTouch will read tESt (Test) *fig. 12*

13. Press: Enter to test 4-20mA Output or Press: Menu twice to exit into Run Mode

14. If Test was selected: DigaTouch will display 4 (4mA) *fig. 11*
    1. Press: Up to increase the mA value or Press down to decrease the mA value

15. Press: Enter once to exit into the main menu or Press: Menu again to exit into Run Mode

figure 12

Configuration of Decimal Point Position

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Down
   1. DigaTouch will Read: SCALE *fig. 13*

3. Press: Enter
   1. DigaTouch will Read: dEc Pt (Decimal Point) *fig. 14*

4. Press: Enter
   1. DigaTouch will Read: 1.0

5. Press: Up or Down to configure desired Decimal Point Position

figure 13

figure 14

Configuration of DigaTouch 4-20mA, 0-5V, 0-10V, Pulse or Frequency INPUT Calibration

This DigaTouch can be calibrated to display the process variable in engineering units by applying the maximum signal that equals the maximum process variable.
Example: 4mA = 0 20mA =2890

Configuration of DigaTouch 4-20mA Analog Input Calibration

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Down
   1. DigaTouch will Read: SCALE (Scale) *fig. 13*

3. Press: Enter
   1. DigaTouch will Read: dEc Pt (Decimal Point) *fig. 14*

4. Press: Down
   1. DigaTouch will Read: n-PntS (Number of Points)
   *Note there are a total of 16 points that can be measured

5. Press: Enter
   1. DigaTouch will read 00

figure 15

figure 16

6. Enter the number of points by pressing: up to configure the first numerals value

7. Press: Down to scroll to the next numeral

8. Press: Up to configure the second numerals value

9. Press: Enter once desired number of points is configured
   1. DigaTouch will Read: Pnt 1 (Point 1 Value) *fig. 16*

10. Press: Enter
    1. DigaTouch will read 000.00
       a. Enter the Value based upon your Input Selection
       b. EX: if 4-20 Input is selected, enter 4 for Point 1 and 20 for Point
    2. Press: Up to configure the first numeral
    3. Press: Down to scroll to the next numerals

11. Once desired Point 1 Value is configured Press: Enter
    1. DigaTouch will Read: dSP 1 (Display 1)
        a. *NOTE: enter a value that you wish to correspond with Point 1
        b. EX: Point 1 = 4mA/Display 1 = 0. Point 2 = 20mA/Display 2 = 2800

12. Press: Up to configure the first numerals value

13. Press: Down to scroll to the next numeral

14. Once desired Display 1 value is configured Press: Enter
    1. DigaTouch will read: Pnt 2 (Point 2) *fig. 17*

15. Press: Enter
    1. DigaTouch will read 000.00

16. Press: Up to configure the first numerals value

17. Press: Down to scroll to the next numerals

18. Once desired Point 2 value is configured Press: Enter
    1. DigaTouch will read: dSP 2 (Display 2) *fig. 18*

19. Press: Enter
    1. DigaTouch will read: 000000

20. Press: Up to configure the first numerals value

21. Press: Down to scroll to the next numeral

22. Once desired Display 2 value is configured Press: Enter
    1. DigaTouch will Read: n-PntS (Number of Points) *fig. 19*

23. Press: Menu twice to exit out into run mode.

Configuration of 4-20 Output Value

This DigaTouch can be configured to Output a predetermined value for both 4mA and 20mA.

1. Press: Menu
    1. DigaTouch will Read: ConFig (Configure) *fig. 1*

2. Press: Down until DigaTouch reads: OutPut (Output) *fig. 20*

3. Press: Enter
    1. DigaTouch will Read: 4 Out (4mA Output Value) *fig. 21*

4. Press: Enter
    1. DigaTouch will Read: 0000.00

5. Press: Up to configure the first numerals value

6. Press: Down to scroll to the next numerals

7. Once desired 4mA Output Value is configured Press: Enter

figure 17

figure 18

figure 19

figure 20

figure 21

figure 22

1. DigaTouch will read 20 Out (20mA Output Value) *fig. 22*

8. Press:Enter

9. Press: Up to configure the first numerals value

10. Press: Down to scroll to the next numerals

11. Once desired 20mA Output Value is configured Press: Enter

12. Press: Menu twice to exit back into Run Mode

figure 23

Configuration of DigaTouch Password Lockout

1. Press: Menu
   1. DigaTouch will Read: ConFig (Configure)

2. Press: Up
   1. DigaTouch will read USEr (User) *fig. 23*

3. Press: Enter
   1. DigaTouch will read PASS (Password Configuration) *fig. 24*

4. Press: Enter
   1. DigaTouch will read 0000
   2. Press: Up to configure the first numeral
   3. Press: Down to scroll to the next numeral
   4. Press: Up to configure the second numeral
   5. Press: Down to scroll to the next numeral
   6. Press: Up to configure the third numeral
   7. Press: Down to scroll to the next numeral
   8. Press: Up to configure the forth numeral

figure 24

figure 25

5. Press: Enter when Password Configuration is complete.
   *NOTE: If password is misplaced or forgotten, DigaTouch Default Password is 2010.

Configuration of DigaTouch ModBus Address

1. Press: Menu
   1. DigaTouch will read Config (Configure) *fig. 1*

2. Press: Up
   1. DigaTouch will read USEr (User) *fig. 23*

3. Press: Enter
   1. DigaTouch will read PASS (Password Configuration) *fig. 24*

4. Press: Down
   1. DigaTouch will read AddrES (ModBus Address) *fig. 25*

5. Press: Enter
   1. DigaTouch will read: 001

6. Press: Up to configure the first numeral (0)

7. Press: Down to scroll to the next numeral

8. Press: Up to configure the second numeral (0)
9. Press: Down to scroll to the next numeral (1)

10. Press: Up to configure this numeral

11. Once ModBus configuration is complete Press: Enter
    1. DigaTouch will read: dEFALt (Default Setting) *fig. 26*

12. Press: Menu twice to exit out to Run Mode.

Restoring DigaTouch to Default Settings

1. Press: Menu
    1. DigaTouch will Read: Config (Configure) *fig. 1*

2. Press: Down
    1. DigaTouch will read rEStor (Restore) *fig. 27*

3. Press: Enter
    1. DigaTouch will read: PASS (Password) *fig. 24*

4. Press: Enter

5. Enter your password and Press: Enter
    1. DigaTouch will read r-dFLt (Restore Default)

6. Press: Enter
    1. DigaTouch will read: no (No, do not restore to Default)
    *Note: to exit and return the main menu without restoring DigaTouch to it's default setting, select no and Press: Enter

7. Press: Up
    1. DigaTouch will read: YES (Yes, restore DigaTouch to default settings)

8. Press: Enter

figure 26

figure 27

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DigaLink™ Software Instructions

ATTENTION: Flow Line Option Corporation is in no way responsible for configuring the end users network. FLO-Corp cannot anticipate Network Security, FIrewalls, Anti-Virus Software, or any other network configurations that may not allow DigaTouch and DigaLink products to communicate properly. Please consult with your IT department if you are experiencing problems.

Introduction

DigaLink enables users to configure DigaCom and DigaTouch devices automatically or manually and allows users to remotely monitor numerical data from a PC. The software locates, connects and monitors all DigaCom and DigaTouch devices found on the local Ethernet network providing a current meter reading for each device. Each DigaCom and DigaTouch device can be configured to continually store numerical data at varying date and time intervals.

Installation and Setup

Software Installation

1. In your internet browser go to http://flowlineoptions.com/digacorp/DigaLinkSoftware.php
2. Click on the Download Button.
3. Follow the onscreen installation instructions.

Setting Up DigaCom and DigaTouch Devices for Remote Monitoring

1. To open the software program, go to the Start Menu > All Programs > Flow Line Options > DigaLink.
2. The DigaLink screen appears and automatically begins searching for DigaCom and DigaTouch devices.
3. When a DigaCom or DigaTouch device is located, an image of the device with its current meter reading is displayed in the top portion of the screen under the Devices tab and the device information (Status, Name, IP Address, Value) is listed and highlighted in the bottom portion of the screen. If more than one device is located, then all the devices are listed in the bottom portion of the screen with the selected device highlighted and its image and current meter reading displayed in the top portion of the screen.
4. Select the Discover Devices button to search for devices.

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Status Indicators
Status Indicators provide the current status of each device by displaying either a green, red or gray circle in the Status column. The Status Indicators are as follows:

Green – Indicates the device is available and meter readings are current.

Status	Name	IP Address	Value	
	Device 1	10.77.17.149	41461	Configure

Red – Indicates the device is unavailable and meter readings are not current. This occurs when network connectivity is lost or the device is turned off.

Status	Name	IP Address	Value	
	Device 1 (Device unavailable - TimedOut)	10.77.17.149	41461	Configure

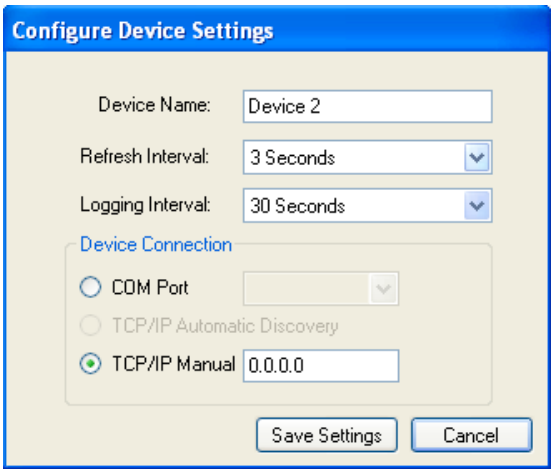
Gray – Indicates the device is unavailable and meter readings are not current. This occurs when the device is unavailable at the time the software is opened.

Status	Name	IP Address	Value	
	Device 1 (Device unavailable)	10.77.17.149	0	Configure

Configuring Devices
Select Configure to view/edit the settings of a device.

Status	Name	IP Address	Value	
	Device 1	10.77.17.149	41461	Configure

The Configure Device Settings screen appears.



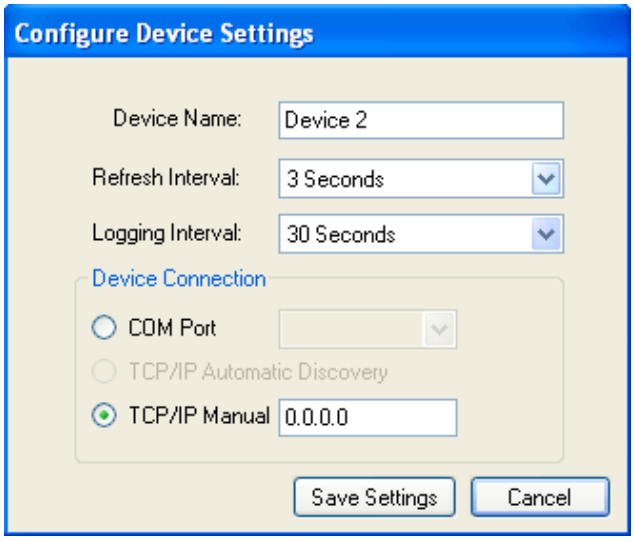
Device Name – Enter text to create a name for the device.

Refresh Interval – Select a time interval from the drop down list to enable the device to continually update the numerical data displayed on the device at the designated time interval.

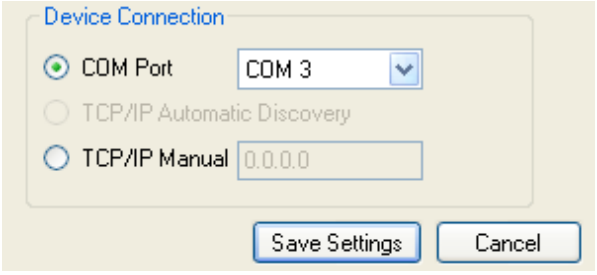
Logging Interval – Select a time interval from the drop down list to enable the device to continually store numerical data at the designated time interval or select Disabled from the drop down list to stop storing numerical data from this device. The logged numerical data is available for viewing under the History tab.

Adding Devices

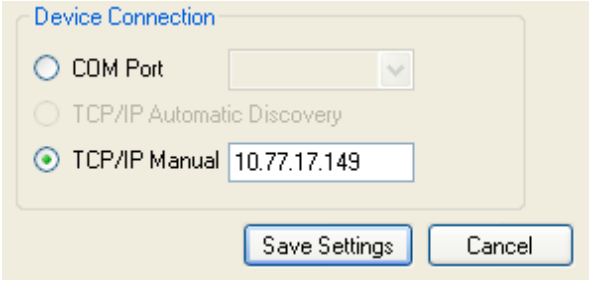
When a device is not found automatically on the local Ethernet network, select the Add Device button to manually connect to a device. The Configure Device Settings screen appears with the options to enter a Device Name and select a Refresh Interval and Logging Interval.



When connecting to the RS485 interface of a DigaCom or DigaTouch device, select the appropriate COM Port the device is connected to from the drop down list and click Save Settings.



When connecting to a DigaCom or DigaTouch device over a network that was not automatically discovered, enter the device IP Address in the text box to the right of TCP/IP Manual and click Save Settings.



Static IP Address and Gateway Configuration

1. Locate and write down the IP address from DigaLink. Leave DigaLink open.

2. Enter the IP address into your web browser in this format: http://xxx.xxx.xxx- with xxx.xxx.xxx as the IP address and NO.com at the end.

3. Press Enter

4. Digi Connect ME will open

5. Sign in to Digi Connect with the USERNAME: root and PASSWORD: dbps

6. Select Login

7. Select Network, located under Configuration on the left hand side of the browser window

8. Change the Radio button to USE THE FOLLOWING IP ADDRESS

9. Enter the desired IP address

10. Enter the desired Subnet Mask address

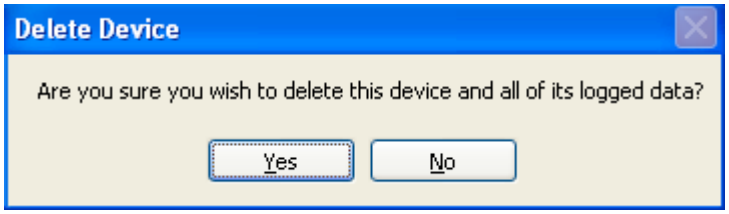
11. Enter the desired Default Gateway address

12. Click Apply

13. Refer to DigaLink Instructions located on page 10

DigaLink will go out and find the new STATIC IP address through the desired Gateway.

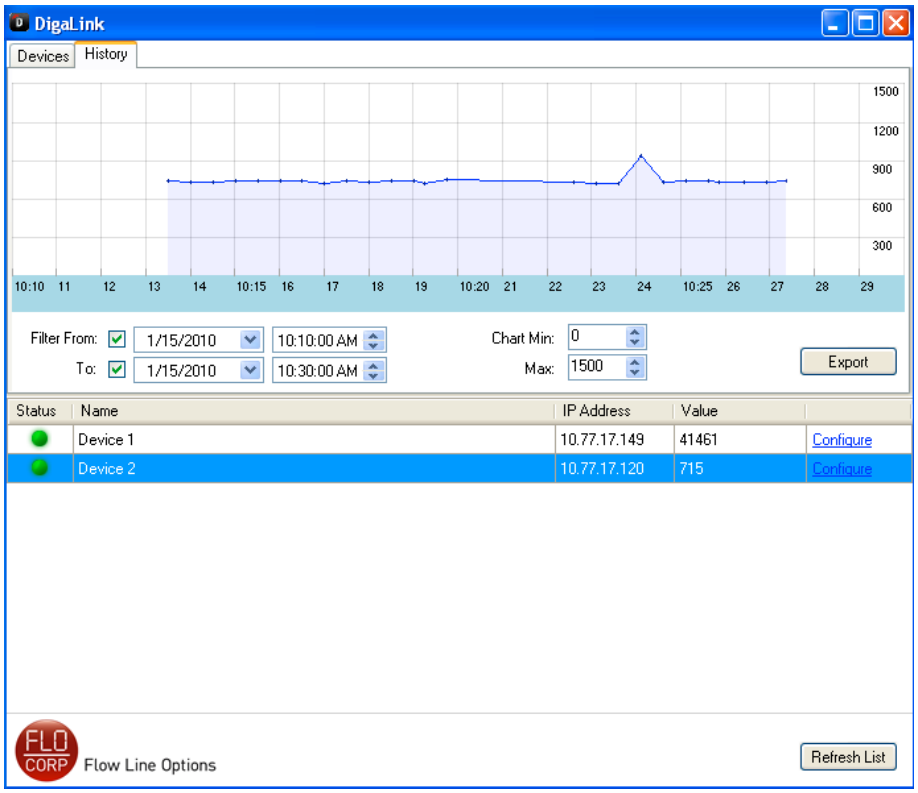
Deleting Devices
To delete a device, click on the device and select the delete button on the keyboard. The following screen will appear:



Select Yes to delete the device or select No to keep the device.

History

Select the History tab to access the logged numerical data from each device.



Filter From/To – Select the Filter From checkbox and To checkbox to change the date and time intervals displayed at the bottom of the history chart. The logged numerical data in the history chart is filtered according to the specified date and time range.

Chart Min/Max – Adjust the numbers in the Min and Max boxes to change the minimum and maximum amounts appearing on the right side of the history chart. The minimum and maximum amounts can be set at different intervals for each device and will be saved.

Export – Select the Export button to export and save the logged numerical data appearing on the history chart as a Comma Separated Value (CSV) file. If Microsoft Office is installed on the computer, the file can be opened with Microsoft Excel.

DigaCom/Touch Modbus Implementation

A subset of the standard Modbus commands is implemented to provide access into the data and status of the DigaCom and DigaTouch meters.

The following Modbus commands are implemented:

Command	Description
04	Read Input Registers
05	Force Single Coil

Opcode 04 - Read Input Registers

This opcode returns the input registers, such as flow rate or totalizer. All data is returned as 16 bit values with the MSB first as required by Modbus.

Note: Each value (1 or 2 registers) must be requested individually. Return of a block of registers is not implemented at this time.

The following Input Registers are defined:

Modbus Register	Starting Address	Description
30001	<0><0>	Device ID
30002	<00><01>	Software Version
30003	<00><02>	Displayed Rate fp - MSB
30004	<00><03>	Displayed Rate fp - LSB
30005	<00><04>	
30006	<00><05>	
30007	<00><06>	
30008	<00><07>	
30009	<00><08>	
30010	<00><09>	
30011-30016	<00><0A> 00><0F>	Spares

This Device ID returns the device ID number. Data is returned as a 16 bit value with the MSB first.

Command: <addr><04><00><00><00><01><crc-16>
Reply: <addr><04><02><ID HI><ID LO><crc-16>

Where:
ID = 0x0001 for DigaCom
ID = 0x0002 for DigaTouch

Command: <addr><04><00><01><00><01><crc-16>
Reply: <addr><04><02><ID HI><ID LO><Version HI><Version LO><crc-16>

Where:
Version HI, LO == 0x01, 0x00 for Version 1.00
Version HI, LO == 0x01, 0x21 for Version 1.21

The flow rate is sent in single precision (4 byte) floating point format. The first register is the first 16 bits. The second register is the last 16 bits.

Command: <addr><04><00><02><00><02><crc-16>
Reply: <addr><04><02><data HI><data LO><crc-16>

Opcode 05 - Force Single Coil

This opcode sets the state of a single coil (digital output).

The following Coil Registers are defined:

Coil #	Description
1.8	Spare
9	No Function
10.16	Spare

The transition of coil 9 from 0 to 1 will initiate function. This bit is auto reset to 0, so there is no need to set it to 0 after a totalizer reset command.

Command: <addr><05><00><08><FF><00><crc-16>
Reply: <addr><05><00><08><FF><00><crc-16>

C Source Code

A.1.1 CRC-16 Calculations

```
unsigned short crc_table[256] = {
  0x0000, 0xC0C1, 0xC181, 0x0140, 0xC301, 0x03C0, 0x0280, 0xC241,
  0xC601, 0x06C0, 0x0780, 0xC741, 0x0500, 0xC5C1, 0xC481, 0x0440,
  0xCC01, 0x0CC0, 0x0D80, 0xCD41, 0x0F00, 0xCFC1, 0xCE81, 0x0E40,
  0x0A00, 0xCAC1, 0xCB81, 0x0B40, 0xC901, 0x09C0, 0x0880, 0xC841,
  0xD801, 0x18C0, 0x1980, 0xD941, 0x1B00, 0xDBC1, 0xDA81, 0x1A40,
  0x1E00, 0xDEC1, 0xDF81, 0x1F40, 0xDD01, 0x1DC0, 0x1C80, 0xDC41,
  0x1400, 0xD4C1, 0xD581, 0x1540, 0xD701, 0x17C0, 0x1680, 0xD641,
  0xD201, 0x12C0, 0x1380, 0xD341, 0x1100, 0xD1C1, 0xD081, 0x1040,
  0xF001, 0x30C0, 0x3180, 0xF141, 0x3300, 0xF3C1, 0xF281, 0x3240,
  0x3600, 0xF6C1, 0xF781, 0x3740, 0xF501, 0x35C0, 0x3480, 0xF441,
  0x3C00, 0xFCC1, 0xFD81, 0x3D40, 0xFF01, 0x3FC0, 0x3E80, 0xFE41,
  0xFA01, 0x3AC0, 0x3B80, 0xFB41, 0x3900, 0xF9C1, 0xF881, 0x3840,
  0x2800, 0xE8C1, 0xE981, 0x2940, 0xEB01, 0x2BC0, 0x2A80, 0xEA41,
  0xEE01, 0x2EC0, 0x2F80, 0xEF41, 0x2D00, 0xEDC1, 0xEC81, 0x2C40,
  0xE401, 0x24C0, 0x2580, 0xE541, 0x2700, 0xE7C1, 0xE681, 0x2640,
  0x2200, 0xE2C1, 0xE381, 0x2340, 0xE101, 0x21C0, 0x2080, 0xE041,
  0xA001, 0x60C0, 0x6180, 0xA141, 0x6300, 0xA3C1, 0xA281, 0x6240,
  0x6600, 0xA6C1, 0xA781, 0x6740, 0xA501, 0x65C0, 0x6480, 0xA441,
  0x6C00, 0xACC1, 0xAD81, 0x6D40, 0xAF01, 0x6FC0, 0x6E80, 0xAE41,
  0xAA01, 0x6AC0, 0x6B80, 0xAB41, 0x6900, 0xA9C1, 0xA881, 0x6840,
  0x7800, 0xB8C1, 0xB981, 0x7940, 0xBB01, 0x7BC0, 0x7A80, 0xBA41,
  0xBE01, 0x7EC0, 0x7F80, 0xBF41, 0x7D00, 0xBDC1, 0xBC81, 0x7C40,
  0xB401, 0x74C0, 0x7580, 0xB541, 0x7700, 0xB7C1, 0xB681, 0x7640,
  0x7200, 0xB2C1, 0xB381, 0x7340, 0xB101, 0x71C0, 0x7080, 0xB041,
  0x5000, 0x90C1, 0x9181, 0x5140, 0x9301, 0x53C0, 0x5280, 0x9241,
  0x9601, 0x56C0, 0x5780, 0x9741, 0x5500, 0x95C1, 0x9481, 0x5440,
  0x9C01, 0x5CC0, 0x5D80, 0x9D41, 0x5F00, 0x9FC1, 0x9E81, 0x5E40,
  0x5A00, 0x9AC1, 0x9B81, 0x5B40, 0x9901, 0x59C0, 0x5880, 0x9841,
  0x8801, 0x48C0, 0x4980, 0x8941, 0x4B00, 0x8BC1, 0x8A81, 0x4A40,
  0x4E00, 0x8EC1, 0x8F81, 0x4F40, 0x8D01, 0x4DC0, 0x4C80, 0x8C41,
  0x4400, 0x84C1, 0x8581, 0x4540, 0x8701, 0x47C0, 0x4680, 0x8641,
  0x8201, 0x42C0, 0x4380, 0x8341, 0x4100, 0x81C1, 0x8081, 0x4040,
};

unsigned short      calculate_crc(const unsigned char *pv, int size)
{
        unsigned short crc = 0xFFFF;
        for ( ;size-- ; pv++)
        {
                crc = (crc >> 8) ^ crc_table[(crc ^ *pv) & 0xFF];
        }
        return crc;
}
```

Ordering Information

FLO-CORP MODEL NUMBER BUILDER For Assistance Call **877.FLO.LINE**

Use the diagram below, working from left to right to construct your Flo-Corp Model Number.
Simply match the category number to the corresponding box number.

FIELD MOUNT APPLICATIONS

Example: DTX1-F-N4 *DigaTouch™ Advanced Universal Process Display, Field Mount, NEMA 4X Enclosure*

DTX1 — ❶ F — ❷

Standard Model #

❶ Enclosure Type (1)
F Field Mount

❷ Enclosure Rating
N4 NEMA 4X (IP65)
N7 NEMA 7

NEMA 4X

NEMA 7

Ordering Notes:
(1) Select the best configuration based on your requirements

Specifications are subject to change without notice.

PANEL MOUNT APPLICATIONS

Example: DTX1-P-GP *DigaTouch™ Advanced Universal Process Display, Panel Mount, General Purpose Enclosure*

DTX1 — ❶ P — ❷

Standard Model #

❶ Enclosure Type (1)
P Panel Mount

❷ Enclosure Rating
N4 NEMA 4X (IP65)
GP General Purpose

NEMA 4X

General Purpose

Ordering Notes:
(1) Select the best configuration based on your requirements

Specifications are subject to change without notice.

Warranty

Flow Line Options Corporation warrants this product against defects in material or workmanship for the specified period under “Specifications” from the date of shipment from the factory. Flow Line Options Corporation liability under this limited warranty shall not exceed the purchase value, repair, or replacement of the defective unit.

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